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# Commercial Fertilizers

The object of this publication is to give to fertilizer consumers information concerning the various materials sold in Maryland from July 1, 1924, to January 1, 1925. A study of this publication should enable buyers to purchase and use fertilizing materials to better advantage.

It is interesting to note that there were eighty-eight fewer brands of fertilizer registered in 1924 than in 1923. This indicates that the Nation-wide movement to eliminate unnecessary, uneconomical and unreasonable grades of mixed fertilizer is having some effect.

STATE FERTILIZER DEPARTMENT

Controlled by

UNIVERSITY OF MARYLAND

COLLEGE PARK, MD.

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# COMMERCIAL FERTILIZERS

**JULY 1, 1924—JANUARY 1, 1925**

Compiled and edited under the supervision and direction of N. E. Gordon, State Chemist, and L. E. Bopst, in charge of Fertilizer, Feed and Lime Departments.

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The inspection, analysis and control work of the fertilizer and feed trade is carried on by the State Department, but the State Department is so related to the chemical work of the University that the other men of the Chemical Staff who are mentioned below may be called on for help in time of need; and furthermore, it is the purpose of the majority of this Chemical Staff to be carrying on some investigations which bear directly or indirectly on the properties of fertilizers, feeds and lime.

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## INTRODUCTION

The duties of the State Fertilizer Department, as set forth in the Fertilizer Law, consist in the registration of brands to be offered for sale; the inspection of methods of labeling and selling; the collection and analysis of official samples; publication of the results obtained; and the analysis of special samples forwarded to the Department by residents of the State. This report covers the work performed from July 1, 1924, to January 1, 1925, and contains a record of the analyses of official samples collected during that period.

State Fertilizer inspectors obtained 1,129 samples of commercial fertilizer from shipments found being offered for sale throughout the State during the year 1924, as compared to 1,028 samples obtained during the year 1923. Four hundred and seventeen of these 1924 samples are covered by the reports in this bulletin, and represent sales made during the fall season. All of these samples were analyzed for the purpose of determining the correctness of the guarantees found on the sacks or attached cards. Results of these analyses have been reported to the respective manufacturers, dealers, and whenever possible to the buyers.

It is a source of gratification to this Department to be able to announce to the public that our records for the season just past, show a very small number of deficiencies—smaller, indeed, than for any corresponding period in years. This condition is particularly encouraging in view of the fact that, for some time past, the fertilizer industry as a whole has been operating on such a microscopic margin of profit that the necessity for economy at every possible point has been imperative. We are glad to note that manufacturers in general have been able to effect such economies without impairing plant efficiency in a manner which would have been reflected in the analysis of the samples taken by our inspectors.

Our records show an approximate expenditure of between four and five millions of dollars for fertilizers by Maryland farmers last year. It is the duty of the State Fertilizer Department to protect the fertilizer buyers of Maryland against fraud in the expenditure of this considerable sum, and at the same time to protect the honest manufacturers and dealers against dishonest competition. The cooperation of fertilizer users to the extent of

refusing to purchase fertilizers not clearly labelled with the legally required information will aid the Department in its task and so react to the benefit of fertilizer buyers in general.

## The Chemical Analysis

Chemical analysis has been, and will remain, the fertilizer buyer's chief safeguard against fraud, and we do not wish to appear to depreciate its importance in any degree; yet, we do wish to emphasize the fact that the chemist's report is not a complete statement of the agricultural value of a mixed fertilizer. Particularly is this true concerning ammonia. Ingredients which give highly satisfactory results for one crop may prove to be of but slight value for another. Many manufacturers of fertilizer devote considerable study to the selection and blending of the materials which enter into their various mixtures. Hence one 2-8-5 or 7-6-5, for instance, may be better suited to the planter's needs than another, even though each mixture meets its chemical guarantee in every respect.

For this reason we recommend that the prospective buyer consult our publication of "Fertilizer Registrations" and use it in conjunction with "Fertilizer Analyses" as a guide in the purchase of fertilizers. Most Maryland fertilizer buyers are finding these publications of immense help, and are becoming more discriminating, consequently the small number of dishonest manufacturers are finding it harder and harder to obtain customers.

## Free Analysis of Fertilizers For Farmers

Section 9 of the Law (Act of 1922) provides that any purchaser of fertilizer, provided he is not a manufacturer or agent of the same, may have taken in the presence of a disinterested witness, samples of fertilizer and forward same with all transportation charges prepaid, to the State Fertilizer Department for analysis, provided that samples so taken shall be from unbroken bags, which have not been damaged or injured in any way, and which have not been in the possession of the owner more than thirty (30) days, provided further that said samples be taken from at least 5% of the bags comprising the brand purchased. In addition, each sample shall be fully described on forms furnished by the State Department, said description giving a full and complete statement of the time and place of sampling, of all marks on the bag and of all facts relating to the same. This description must be signed by the purchaser of the fertilizer, the person drawing the sample, and

the witness. This information shall not be sent to the State department until the report of analysis has been received by the sender of the fertilizer.

The laboratories of the Department endeavor to so organize their work that reports of the analyses of such samples shall be in the hands of the senders not more than ten days after the receipt of the sample at our office.

Those who send such samples should bear in mind the fact that the work of sampling is fully as important as that of the chemist and that unless such samples are very carefully taken the resultant analysis will be totally worthless. The Department has on record numerous instances where unofficial samples were found to analyze considerably higher, or lower, than official samples drawn by State Inspectors from the same lots of fertilizer.

The person sampling must remember that even the most careful and efficient commercial mixing procedure does not produce a fertilizer mixture which runs absolutely uniform. It is not to be expected that any two bags of fertilizer will give absolutely identical analyses. For this reason it is necessary that lots be drawn from a number of bags in order that a truly representative sample may be obtained. Whenever possible at least ten bags should be sampled.

Nor is it sufficient merely to open a bag and scoop a handful or two out of the top. During handling and transportation the various ingredients tend to separate themselves from each other, owing to differences in weight and degree of fineness. All official samples are taken with the aid of a sampling tube which withdraws a core about an inch and a half in diameter and extending from the top to the bottom of the bag. When such an instrument is not available, samples should be taken from the top, center, and bottom of each bag examined.

The various lots of fertilizer thus obtained from different bags should be placed on a piece of oilcloth or strong paper and thoroughly mixed by lifting each edge of the cloth or paper in turn, repeating the operation several times. The pile should then be quartered so that four piles of roughly triangular shape be obtained. A tablespoon of fertilizer should then be taken from each of the three corners of each quarter and placed in a container.

A sample obtained in this manner is truly representative of the lot from which it is drawn and the analysis obtained furnishes reliable information.

## Values For Fall of 1924

Since the analysis in our laboratory gives the percentage or pounds per hundred, it is only necessary to multiply the price per pound by twenty in order to get the value of one per cent for one ton of fertilizer. This is designated in the following table as the value per unit. A unit is one per cent of one ton, or twenty pounds.

## Table For Calculating Fertilizer Values

| | Per Unit |
|---|---|
| (1) Nitrogen calculated as Ammonia | $4.00 |
| (2) Available Phosphoric Acid: | |
| (a) In mixed fertilizers or in dissolved rock | .60 |
| (b) In tankage or ground bone | .50 |
| (3) Insoluble Phosphoric Acid | .15 |
| (4) Potash | .70 |

## Values

In order to compare values of fertilizers multiply the percentage of each plant food in the fertilizer by the respective value per unit given in the table and add the results together: For example, in the case of a complete fertilizer with an analysis of 4-8-5, we would have four per cent of ammonia, eight per cent of phosphoric acid and five per cent of potash. Since, by the above table, ammonia is worth $4.00 per unit, available phosphoric acid 60c., and potash 70c., we have $24.30.

4 x $4.00=$16.00 value of ammonia in one ton.
8 x 0.60= 4.80 value of phosphoric acid in one ton.
5 x 0.70= 3.50 value of potash in one ton.

$24.30 value of fertilizer in one ton.

## Explanation of Tables and Values

The results of the analyses of fertilizer samples collected from July 1, 1924, to January 1, 1925, are presented in the tables which follow. The amounts of the respective constituents present, as determined in our laboratories, are stated in the columns headed "Found;" the amounts guaranteed by the manufacturers are stated in the columns headed "Guaranteed."

Unfortunately, the "Value per ton Found" and the "Value per ton Guaranteed," which the State Fertilizer Law requires shall be published in conjunction with each analysis, appear to be the source of some misunderstanding among the readers of the

bulletin. Let us state definitely at the outset that, while these figures are based upon actual commercial values, they distinctly do not represent retail selling prices.

The question, then, naturally arises: Just what do these values signify, and what purpose are they intended to serve?

The first query may be most satisfactorily answered by an explanation of the manner in which one arrives at these values. Let us suppose that we are to calculate the value of one unit (20 pounds) of ammonia. We consult the monthly market quotations and compute the seasons's average wholesale prices on the various raw materials commonly used as sources of ammonia in the fertilizer industry. Nitrate of soda contains approximately 18 units of nitrogen (calculated as ammonia) per ton, therefore, we divide the price per ton by 18 and obtain as a result the average wholesale price of one unit of ammonia from this source. Sulfate of ammonia contains 25 units of ammonia per ton; hence, we divide the ton price quoted by 25 and obtain the average wholesale price of one unit of ammonia from sulfate. When we have thus considered all the important sources of fertilizer ammonia we calculate the average wholesale price per unit of ammonia from the various sources. For the present season, this gives us a value of $4.00 for each unit or per cent of ammonia.

Arguments have been advanced to the effect that comparative values afford means for a somewhat more accurate comparison between commercial value found and commercial value guaranteed than does a casual glance at the analysis. Let us consider the hypothetical case of two samples of 4-8-5, one of which shows a deficiency of ½% in ammonia, and the other a deficiency of ½% in potash. Each is guaranteed to contain 17 units of plant food, and each actually contains 16½ units, yet the purchaser of the former has been defrauded to a greater extent than has the purchaser of the latter, for ammonia is considerably more expensive than potash. Our report would make that fact immediately apparent:

| | Value per ton Guaranteed: | Value per ton Found: |
|---|---|---|
| No. 1 | $24.30 | $22.30=½% low in ammonia. |
| No. 2 | 24.30 | 23.95=½% low in potash. |

It is a mistake to assume that an overage in one constituent can be considered as compensating a grower for a deficiency in the amount of another constituent, which he had counted on obtain-

ing to fulfill the particular needs of his crop and soil, even though he actually receives commercial value as great or greater than that for which he paid.

Let us, however, specifically emphasize the fact that our comparative values do not under any circumstances represent the retail selling price of any particular brand of goods at any particular place, since they do not include:

1. The cost of mixing.
2. The cost of the bags.
3. Freight charges.
4. Taxes.
5. Bad accounts.
6. The expenses of the office and salesmen.
7. A fair return upon the money invested.

## TABLES

The following pages contain a detailed report of the results obtained in the inspection of fertilizers from July 1, 1924, to January 1, 1925:

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Manufactured for Agricultural Corporation of Md., B** | **alto., Md.** | | | | | | | | | | | | |
| **By The Piedmont-Mt. Airy Gu** | **ano Co., Balto.,** | **Md.** | | | | | | | | | | | |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.15 | | 15.75 | 16.00 | | | $9.62 | $9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.05 | | 15.95 | 16.00 | | | 9.73 | 9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.13 | | 15.72 | 16.00 | | | 9.60 | 9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.15 | | 13.75 | 16.00 | | | 8.42 | 9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | .75 | | 15.40 | 16.00 | | | 9.35 | 9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.18 | | 16.07 | 16.00 | | | 9.82 | 9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.30 | | 16.00 | 16.00 | | | 9.80 | 9.60 |
| Farm Bureau Acid Phosphate, 16% | Baltimore | | | | | 1.75 | | 15.30 | 16.00 | | | 9.44 | 9.60 |
| Farm Bureau, 2-12-4 | Baltimore | 1.55 | .67 | 2.08 | 2.00 | 1.30 | | 12.00 | 12.00 | 5.16 | 4.00 | 19.33 | 18.00 |
| Farm Bureau, 2-12-4 | Baltimore | 1.46 | .67 | 2.01 | 2.00 | 1.60 | | 12.00 | 12.00 | 4.20 | 4.00 | 18.42 | 18.00 |
| Farm Bureau, 2-12-4 | Baltimore | 1.45 | .67 | 2.00 | 2.00 | 1.55 | | 11.90 | 12.00 | 3.60 | 4.00 | 17.89 | 18.00 |
| Farm Bureau, 2-12-4 | Baltimore | 1.35 | .67 | 1.76 | 2.00 | 1.75 | | 12.35 | 12.00 | 4.36 | 4.00 | 17.76 | 18.00 |
| **American Agricultural Chem. Co.,** | **New York, N. Y.** | | | | | | | | | | | | |
| Acid Phosphate, 16% | Lenoardtown | | | | | .95 | | 16.00 | 16.00 | | | 9.74 | 9.60 |
| Basic Lime Phosphate | Baltimore | | | | | 3.35 | 1.00 | 11.65 | 13.00 | | | 7.49 | 7.95 |
| Fine Ground Bone | Baltimore | | | 3.14 | 3.00 | | | *25.05 | *22.88 | | | 25.09 | 23.44 |
| Ground Tankage | Cardova | | | 6.01 | 6.00 | | | *14.35 | *13.73 | | | 31.22 | 30.87 |
| Matchless Potash Manure | Upper Marlboro | 1.43 | 1.03 | 2.01 | 2.00 | 1.00 | | 7.95 | 8.00 | 2.04 | 2.00 | 14.39 | 14.20 |
| Matchless Potash Manure | Baltimore | 1.52 | 1.03 | 2.00 | 2.00 | .95 | | 8.10 | 8.00 | 2.16 | 2.00 | 14.51 | 14.20 |
| Peerless Veg. and Grain Grower | Baltimore | 1.60 | 1.03 | 2.03 | 2.00 | 1.05 | | 8.05 | 8.00 | 5.00 | 5.00 | 16.61 | 16.30 |
| Pure Bone Meal | Upper Marlboro | | | 4.64 | 4.50 | | | *21.05 | *21.51 | | | 29.09 | 28.76 |
| Pure Bone Meal | Baltimore | | | 4.56 | 4.50 | | | *21.00 | *21.51 | | | 28.74 | 28.76 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red Dragon Guano, 2-12-2 | Baltimore | 1.57 | 1.03 | 2.00 | 2.00 | 1.10 | | 12.20 | 12.00 | 2.28 | 2.00 | 17.09 | 16.60 |
| Special Manure, 1-8-1 | Baltimore | .61 | .43 | 1.04 | 1.00 | 1.00 | | 8.20 | 8.00 | 1.08 | 1.00 | 9.99 | 9.50 |
| Victory Phosphate and Potash | Baltimore | | | | | .85 | | 12.15 | 12.00 | 5.20 | 5.00 | 11.06 | 10.70 |
| Canton Chemical Baker's Special Wheat ,Corn and Grass Mixture | Baltimore | .77 | .43 | 1.15 | 1.00 | 1.25 | | 8.50 | 9.00 | 3.90 | 2.00 | 12.62 | 10.80 |
| Detrick's Gold Eagle, 3-6-6 | Baltimore | 1.76 | 1.52 | 2.20 | 3.00 | .65 | | 7.45 | 6.00 | 4.95 | 6.00 | 16.84 | 19.80 |
| Lazaretto Complete Compound | Baltimore | .60 | .43 | .99 | 1.00 | 1.00 | | 8.00 | 8.00 | 4.08 | 4.00 | 11.77 | 11.60 |
| Lazaretto Fmrs. Chc. Brand, 1-8-2 | Baltimore | .69 | .43 | 1.01 | 1.00 | .95 | | 8.15 | 8.00 | 2.24 | 2.00 | 10.64 | 10.20 |
| Lazaretto Fmrs. Chc. Brand, 1-8-2 | Baltimore | .72 | .43 | 1.11 | 1.00 | 1.00 | | 8.30 | 8.00 | 2.12 | 2.00 | 11.05 | 10.20 |
| Lister's H. G. Acid Phosphate | Baltimore | | | | | 1.05 | | 16.05 | 16.00 | | | 9.79 | 9.60 |
| Lister's H. G. Acid Phosphate | Baltimore | | | | | .80 | | 16.00 | 16.00 | | | 9.72 | 9.60 |
| Lister's H. G. Acid Phosphate | Baltimore | | | | | 1.10 | | 16.40 | 16.00 | | | 10.01 | 9.60 |
| Lister's H. G. Acid Phosphate | Baltimore | | | | | 1.05 | | 16.25 | 16.00 | | | 9.91 | 9.60 |
| Lister's Alkaline Fertilizer | Baltimore | | | | | .40 | | 11.80 | 12.00 | 5.00 | 5.00 | 10.64 | 10.70 |
| Lister's Fish Brand Fertilizer | Baltimore | .85 | .43 | 1.19 | 1.00 | 1.15 | | 9.25 | 9.00 | 2.00 | 2.00 | 11.88 | 10.80 |
| Lister's Golden Sheaf, 1-8-1 | Baltimore | .97 | .43 | 1.36 | 1.00 | 1.55 | | 7.50 | 8.00 | 1.02 | 1.00 | 10.88 | 9.50 |
| Lister's Harvest Queen Phos., 1-9-3 | Baltimore | .72 | .43 | 1.06 | 1.00 | .95 | | 8.95 | 9.00 | 3.16 | 3.00 | 11.96 | 11.50 |
| Lister's Harvest Queen Phos., 1-9-3 | Baltimore | .68 | .43 | 1.06 | 1.00 | .15 | | 10.25 | 9.00 | 3.12 | 3.00 | 12.59 | 11.50 |
| Lister's Harvest Queen Phos., 1-9-3 | Baltimore | .63 | .43 | 1.02 | 1.00 | 1.30 | | 9.30 | 9.00 | 3.00 | 3.00 | 11.96 | 11.50 |
| Lister's 10% Potash Fertilizer | Baltimore | 1.28 | 1.03 | 1.86 | 2.00 | 1.10 | | 8.40 | 8.00 | 9.50 | 10.00 | 19.30 | 19.80 |
| Patapsco Coon Brand Guano, 1-9-2 | Baltimore | .74 | | 1.08 | 1.00 | .55 | | 9.65 | 9.00 | 2.00 | 2.00 | 11.59 | 10.80 |
| Pollock's H. G. Super Phosphate | Baltimore | | | | | 1.13 | | 16.32 | 16.00 | | | 9.96 | 9.60 |
| Pollock's Elec. Phosphate, 0-12-5 | Baltimore | | | | | 1.05 | | 12.25 | 12.00 | 5.88 | 5.00 | 11.63 | 10.70 |
| Pollock's Wheat and Corn Fert. | Baltimore | .77 | .43 | 1.01 | 1.00 | 1.05 | | 8.00 | 8.00 | 2.50 | 2.00 | 10.75 | 10.20 |
| Wooldridge's H. G. Acid Phosphate. | Baltimore | | | | | 1.20 | | 16.10 | 16.00 | | | 9.84 | 9.60 |
| Wooldridge's H. G. Acid Phosphate. | Baltimore | | | | | 1.05 | | 16.55 | 16.00 | | | 10.09 | 9.60 |
| Wooldridge's Grain and Grass Prod. | Baltimore | | | | | 1.15 | | 9.40 | 10.00 | 4.00 | 4.00 | 8.61 | 8.80 |
| Wooldridge's Old Sledge Phos., 0-12-5 | Baltimore | | | | | .50 | | 12.00 | 12.00 | 5.72 | 5.00 | 11.28 | 10.70 |
| Wooldridge's Triumph Brand Phos., 2-8-3 | Baltimore | 1.60 | 1.03 | 2.03 | 2.00 | .90 | | 9.50 | 8.00 | 3.12 | 3.00 | 16.14 | 14.90 |
| Woolridge's Triumph Brand Phos., 2-8-3 | Baltimore | 1.53 | 1.03 | 2.01 | 2.00 | 1.15 | | 8.75 | 8.00 | 3.28 | 3.00 | 15.76 | 14.90 |
| **American Fertilizing Company, Ba** | **lto., Md.** | | | | | | | | | | | | |
| Double Extra Phos. and Potash | Baltimore | | | | | .60 | | 12.80 | 12.00 | 5.28 | 5.00 | 11.47 | 10.70 |
| Golden Harvest | Baltimore | 3.07 | 1.54 | 3.34 | 3.00 | .85 | | 8.05 | 8.00 | 8.32 | 8.00 | 24.14 | 22.40 |

*Total Phosphoric Acid.

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Armour Fertilizer Works, Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate | Baltimore | | | | | .05 | | 16.00 | 16.00 | | | $9.61 | $9.60 |
| Big Crop Bone Meal | Clinton | | | 5.55 | 3.00 | | | *21.15 | *22.00 | | | 32.78 | 23.00 |
| Big Crop Bone Meal | Baltimore | | | 4.64 | 3.00 | | | *21.00 | *22.00 | | | 29.06 | 23.00 |
| Big Crop Grower, 1-8-2 | Baltimore | .88 | .50 | 1.29 | 1.00 | .90 | | 7.60 | 8.00 | 2.36 | 2.00 | 11.51 | 10.20 |
| Big Crop, 2-8-10 | Clinton | 1.08 | 1.00 | 1.90 | 2.00 | .50 | | 8.00 | 8.00 | 10.24 | 10.00 | 19.65 | 19.80 |
| Big Crop, 2-8-10 | Baltimore | 1.17 | 1.00 | 2.01 | 2.00 | .20 | | 8.00 | 8.00 | 10.40 | 10.00 | 20.15 | 19.80 |
| Big Crop, 2-12-2 | Baltimore | 1.43 | 1.00 | 2.01 | 2.00 | .83 | | 11.87 | 12.00 | 2.40 | 2.00 | 16.96 | 16.60 |
| Big Crop, 2-16-2 | Baltimore | 1.47 | 1.00 | 1.88 | 2.00 | .40 | | 15.75 | 16.00 | 2.20 | 2.00 | 18.57 | 19.00 |
| Fish and Potash Mixture, 2-8-3 | Baltimore | .99 | 1.00 | 1.79 | 2.00 | .35 | | 8.25 | 8.00 | 3.08 | 3.00 | 14.32 | 14.90 |
| Grain Grower, 2-8-2 | Baltimore | 1.28 | 1.00 | 2.01 | 2.00 | .40 | | 7.90 | 8.00 | 2.08 | 2.00 | 14.30 | 14.20 |
| Lime Phosphate | Baltimore | | | | | .75 | | 12.80 | 13.00 | | | 7.79 | 7.80 |
| Nitrate of Soda | Clinton | | | 18.74 | 18.00 | | | | | | | | |
| Royal Ammoniated, 1-8-4 | Baltimore | .44 | .50 | 1.09 | 1.00 | 1.00 | | 7.35 | 8.00 | 3.84 | 4.00 | 11.61 | 11.60 |
| Royal Ammoniated, 1-8-4 | Baltimore | .47 | .50 | 1.08 | 1.00 | .55 | | 8.45 | 8.00 | 3.78 | 4.00 | 12.12 | 11.60 |
| Royal Ammoniated, 1-8-4 | Baltimore | .46 | .50 | 1.06 | 1.00 | .40 | | 9.00 | 8.00 | 3.38 | 4.00 | 12.07 | 11.60 |
| Royal Ammoniated, 1-8-4 | Baltimore | .37 | .50 | 1.02 | 1.00 | .80 | | 8.10 | 8.00 | 3.62 | 4.00 | 11.59 | 11.60 |
| Sulphate of Ammonia | Clinton | | | 24.97 | 25.00 | | | | | | | | |
| **Baltimore Fertilizer Co., Balto., Md.** | | | | | | | | | | | | | |
| Honest Acid Phosphate, 16% | Baltimore | | | | | .65 | 1.00 | 16.05 | 16.00 | | | 9.73 | 9.75 |
| Honest Ammoniated Bone, 2-8-2 | Baltimore | 1.35 | 1.00 | 1.98 | 2.00 | 1.60 | | 11.80 | 8.00 | 2.58 | 2.00 | 17.05 | 14.20 |
| Honest Ammoniated Bone, 2-8-2 | Bel Air | 1.13 | 1.00 | 1.98 | 2.00 | 2.03 | | 7.62 | 8.00 | 2.94 | 2.00 | 14.86 | 14.20 |
| Honest Crop Grower, 1-8-1 | Baltimore | .53 | .49 | .99 | 1.00 | 1.00 | 1.00 | 8.40 | 8.00 | 1.28 | 1.00 | 10.05 | 9.65 |
| Honest, 1-9-3 | Baltimore | .51 | .49 | .99 | 1.00 | .70 | 1.00 | 9.10 | 9.00 | 2.74 | 3.00 | 11.45 | 11.50 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Honest, 2-8-5 | Bel Air | 1.06 | 1.00 | 1.74 | 2.00 | 1.50 | | 8.40 | 8.00 | 5.36 | 5.00 | 15.98 | 16.30 |
| Honest, 2-8-4 | Baltimore | 1.43 | 1.00 | 2.01 | 2.00 | .70 | 1.00 | 8.05 | 8.00 | 4.12 | 4.00 | 15.86 | 15.75 |
| Honest, 2-8-4 | Bel Air | 1.04 | 1.00 | 1.74 | 2.00 | 1.65 | | 8.45 | 8.00 | 5.10 | 4.00 | 15.85 | 15.60 |
| Honest, 2-8-10 | Baltimore | 1.35 | 1.00 | 1.90 | 2.00 | .70 | | 8.40 | 8.00 | 9.60 | 10.00 | 19.47 | 19.80 |
| Old Honesty, ½-8-2 | Baltimore | | | .63 | .50 | .90 | | 8.10 | 8.00 | 2.60 | 2.00 | 9.34 | 8.20 |
| **Baltimore Pulverizing Co., Balto., Md.** | | | | | | | | | | | | | |
| Corn and Grain Grower, 0-12-4 | Baltimore | | | | | .90 | | 11.05 | 12.00 | 4.08 | 4.00 | 9.63 | 10.00 |
| Royal Compound, 2-8-2 | Baltimore | 1.50 | 1.00 | 2.01 | 2.00 | 1.15 | | 8.15 | 8.00 | 2.04 | 2.00 | 14.53 | 14.20 |
| **Baugh and Sons Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | .40 | | 16.70 | 16.00 | | | 10.08 | 9.60 |
| Acid Phosphate, 16% | Baltimore | | | | | .15 | | 16.05 | 16.00 | | | 9.65 | 9.60 |
| Acid Phosphate, 16% | Baltimore | | | | | .45 | | 16.55 | 16.00 | | | 10.00 | 9.60 |
| Acid Phosphate, 16% | Baltimore | | | | | .55 | | 16.05 | 16.00 | | | 9.71 | 9.60 |
| Acid Phosphate, 16% | Preston | | | | | .60 | | 16.30 | 16.00 | | | 9.87 | 9.60 |
| Acid Phosphate, 16% | Baltimore | | | | | .50 | | 16.30 | 16.00 | | | 9.86 | 9.60 |
| Acid Phosphate, 16% | Baltimore | | | | | .65 | | 16.35 | 16.00 | | | 9.91 | 9.60 |
| Commercial Superphosphate, 2-8-10 | Preston | 1.52 | .90 | 2.12 | 2.00 | .90 | | 8.40 | 8.00 | 10.00 | 10.00 | 20.66 | 19.80 |
| Commercial Superphosphate, 2-8-10 | Baltimore | 1.60 | .90 | 2.15 | 2.00 | .80 | | 8.60 | 8.00 | 10.00 | 10.00 | 20.88 | 19.80 |
| Comp. Animal Base Fert., 2-8-5 | Baltimore | 1.54 | .90 | 2.00 | 2.00 | .70 | | 8.50 | 8.00 | 5.24 | 5.00 | 16.88 | 16.30 |
| Comp. Animal Base Fert., 2-8-5 | Baltimore | 1.62 | .90 | 2.01 | 2.00 | .50 | | 8.20 | 8.00 | 5.24 | 5.00 | 16.71 | 16.30 |
| Comp. Animal Base Fert., 2-8-5 | Baltimore | 1.69 | .90 | 2.08 | 2.00 | .40 | | 8.30 | 8.00 | 5.16 | 5.00 | 16.97 | 16.30 |
| Comp. Animal Base Fert., 2-8-5 | Baltimore | 1.46 | .90 | 2.01 | 2.00 | .60 | | 8.00 | 8.00 | 5.20 | 5.00 | 16.57 | 16.30 |
| Comp. Animal Base Fert., 2-8-5 | Preston | 1.69 | .90 | 2.15 | 2.00 | .75 | | 8.05 | 8.00 | 5.28 | 5.00 | 17.24 | 16.30 |
| Double Eagle Phosphate, 2-10-4 | Baltimore | 1.55 | .90 | 2.03 | 2.00 | .70 | | 9.85 | 10.00 | 4.36 | 4.00 | 17.19 | 16.80 |
| Excelsior Guano, 1-8-4 | Baltimore | .92 | .60 | 1.19 | 1.00 | .65 | | 8.15 | 8.00 | 4.28 | 4.00 | 12.75 | 11.60 |
| Excelsior Guano, 1-8-4 | Baltimore | .74 | .60 | 1.08 | 1.00 | .75 | | 8.25 | 8.00 | 4.00 | 4.00 | 12.18 | 11.60 |
| General Crop Grower, 1-12-1 | Baltimore | .68 | .60 | 1.19 | 1.00 | 1.00 | | 12.40 | 12.00 | 1.36 | 1.00 | 13.30 | 11.90 |
| General Crop Grower, 1-12-1 | Baltimore | .59 | .60 | 1.19 | 1.00 | 1.15 | | 12.65 | 12.00 | 1.28 | 1.00 | 13.42 | 11.90 |
| General Crop Grower, 1-12-1 | Baltimore | .58 | .60 | 1.16 | 1.00 | .80 | | 11.90 | 12.00 | 1.28 | 1.00 | 12.80 | 11.90 |
| Lime and Phosphate | Baltimore | | | | | 1.55 | | 13.05 | 13.00 | | | 8.06 | 7.80 |
| Lime and Phosphate | Baltimore | | | | | 1.80 | | 12.95 | 13.00 | | | 8.04 | 7.80 |
| Lime and Phosphate | Baltimore | | | | | .40 | | 14.65 | 13.00 | | | 8.85 | 7.80 |
| Old Stand-By Dis. Animal Base | Baltimore | 1.43 | .90 | 2.08 | 2.00 | 1.25 | | 12.25 | 12.00 | 2.32 | 2.00 | 17.48 | 16.60 |
| Phos. and Potash Mix., 12 and 5 | Baltimore | | | | | .80 | | 12.40 | 12.00 | 5.00 | 5.00 | 11.06 | 10.70 |
| Phos. and Potash Mix., 12 and 5 | Baltimore | | | | | .55 | | 12.05 | 12.00 | 5.36 | 5.00 | 11.06 | 10.70 |

*Total Phosphoric Acid.

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Baugh and Sons Co., Baltimore, Md. Cont.** | | | | | | | | | | | | | |
| Phos. and Potash Mix., 12 and 5 | Preston | | | | | .90 | | 12.00 | 12.00 | 5.12 | 5.00 | $10.92 | $10.70 |
| Phos. and Potash Mix., 12 and 5 | Baltimore | | | | | 1.10 | | 12.10 | 12.00 | 5.36 | 5.00 | 11.18 | 10.70 |
| Peruvian Guano Substitute | Baltimore | 3.98 | 3.65 | 4.61 | 5.00 | .20 | | 8.80 | 8.00 | 5.04 | 5.00 | 27.28 | 28.30 |
| Pure Bone and Muriate Pot. Mix. | Baltimore | | | 2.38 | 2.50 | | | *20.00 | *20.00 | 4.80 | 5.00 | 22.88 | 23.50 |
| Raw Bone Meal | Baltimore | | | 4.57 | 4.50 | | | *21.05 | *21.50 | | | 28.81 | 28.75 |
| Wheat Fertilizer | Baltimore | 1.57 | .92 | 2.03 | 2.00 | .45 | | 9.03 | 9.00 | 2.08 | 2.00 | 15.07 | 14.80 |
| Wheat Fertilizer | Baltimore | 1.60 | .92 | 2.13 | 2.00 | .55 | | 9.25 | 9.00 | 2.16 | 2.00 | 15.66 | 14.80 |
| Wheat Fertilizer | Baltimore | 1.54 | .92 | 2.05 | 2.00 | .40 | | 9.10 | 9.00 | 2.32 | 2.00 | 15.34 | 14.80 |
| Wheat Fertilizer | Baltimore | 1.57 | .92 | 2.08 | 2.00 | .30 | | 9.30 | 9.00 | 2.04 | 2.00 | 15.38 | 14.80 |
| **Beckley Fertilizer Co., Hagerstown, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Hagerstown | | | | | 1.00 | | 16.90 | 16.00 | | | 10.29 | 9.60 |
| Bone Mixture, 1½-14-0 | Hagerstown | | | 1.54 | 1.50 | .50 | | 14.00 | 14.00 | | | 14.64 | 14.40 |
| Crop Grower, 1-9-3 | Hagerstown | .48 | .60 | .87 | 1.00 | .95 | | 9.15 | 9.00 | 3.00 | 3.00 | 11.21 | 11.50 |
| **Bryant Fertilizer Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | .10 | | 16.00 | 16.00 | | | 9.62 | 9.60 |
| **Herbert Bryant's Son, Alexandria, Va.** | | | | | | | | | | | | | |
| Belle Haven Ammoniated Bone | Gaithersburg | | | 2.01 | 2.00 | 2.65 | | 8.20 | 8.00 | 5.34 | 5.00 | 17.10 | 16.30 |
| **Central Chemical Co., Hagerstown, Md.** | | | | | | | | | | | | | |
| Gro-All Dissolved Phosphate, 16% | Baltimore | | | | | 1.00 | | 15.95 | 16.00 | | | 9.72 | 9.60 |
| Gro-All Dissolved Phosphate, 16% | Baltimore | | | | | 1.40 | | 16.00 | 16.00 | | | 9.81 | 9.60 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gro-All Dissolved Phosphate, 16% | Baltimore | | | | | 1.58 | | 16.02 | 16.00 | | | 9.85 | 9.60 |
| Gro-All Dissolved Phosphate, 16% | Baltimore | | | | | .50 | | 16.10 | 16.00 | | | 9.74 | 9.60 |
| Gro-All Commonwealth, 0-10-2 | Preston | | | | | .80 | | 10.00 | 10.00 | 2.04 | 2.00 | 7.55 | 7.40 |
| Gro-All Commonwealth, 0-10-2 | Baltimore | | | | | .75 | | 10.45 | 10.00 | 2.24 | 2.00 | 7.95 | 7.40 |
| Gro-All Crown Jewel, 1-9-3 | Frederick | .55 | .60 | .99 | 1.00 | .10 | | 9.15 | 9.00 | 3.00 | 3.00 | 11.57 | 11.50 |
| Gro-All Crown Jewel, 1-9-3 | Baltimore | .58 | .60 | 1.01 | 1.00 | .95 | | 8.95 | 9.00 | 3.04 | 3.00 | 11.68 | 11.50 |
| Gro-All Crown Jewel, 1-9-3 | Preston | .46 | .60 | 1.02 | 1.00 | .80 | | 9.40 | 9.00 | 2.80 | 3.00 | 11.80 | 11.50 |
| Gro-All Crown Jewel, 1-9-3 | Baltimore | .48 | .60 | 1.06 | 1.00 | .90 | | 9.40 | 9.00 | 3.00 | 3.00 | 12.12 | 11.50 |
| Gro-All Excelsior, 2-8-4 | Preston | 1.42 | .60 | 1.97 | 2.00 | .40 | | 8.60 | 8.00 | 4.00 | 4.00 | 15.90 | 15.60 |
| Gro-All Excelsior, 2-8-4 | Baltimore | 1.40 | .60 | 1.98 | 2.00 | .40 | | 8.90 | 8.00 | 4.04 | 4.00 | 16.15 | 15.60 |
| Gro-All Fish and Potash Comp. | Frederick | .69 | .61 | 1.25 | 1.25 | .55 | | 9.15 | 9.00 | 2.16 | 2.00 | 12.08 | 11.80 |
| Gro-All Gen. Crop Grower, 1-12-1 | Baltimore | .56 | .60 | 1.02 | 1.00 | .30 | | 12.90 | 12.00 | 1.28 | 1.00 | 12.77 | 11.90 |
| Gro-All Golden Sheaf, 1-8-1 | Baltimore | .67 | .60 | 1.01 | 1.00 | 1.00 | | 9.90 | 8.00 | 1.96 | 1.00 | 11.70 | 9.50 |
| Gro-All Golden Sheaf, 1-8-1 | Frederick | .46 | .61 | .85 | 1.00 | .75 | | 8.15 | 8.00 | 1.04 | 1.00 | 9.13 | 9.50 |
| Gro-All Grain and Grass Grower, 2-12-2 | Frederick | 1.19 | .61 | 1.62 | 2.00 | .45 | | 11.95 | 12.00 | 2.00 | 2.00 | 15.12 | 16.60 |
| Gro-All Pioneer, 0-8-5 | Frederick | | | | | .80 | | 7.60 | 8.00 | 4.38 | 5.00 | 7.75 | 8.30 |
| Gro-All Pioneer, 0-8-5 | Preston | | | | | .60 | | 8.40 | 8.00 | 4.74 | 5.00 | 8.45 | 8.30 |
| Gro-All Pioneer, 0-8-5 | Baltimore | | | | | .80 | | 8.50 | 8.00 | 5.00 | 5.00 | 8.72 | 8.30 |
| Gro-All Planters Mixture, 1-8-6 | Frederick | .43 | .61 | .82 | 1.00 | .45 | | 8.15 | 8.00 | 5.80 | 6.00 | 12.30 | 13.00 |
| Gro-All Potash Special, 12-5 | Frederick | | | | | .55 | | 12.15 | 12.00 | 5.00 | 5.00 | 10.87 | 10.70 |
| **Devilbiss Bros., New Windsor, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | New Windsor | | | | | .73 | | 16.22 | 16.00 | | | 9.84 | 9.60 |
| Butcher House Phosphate | New Windsor | .28 | .30 | 1.08 | 1.00 | .90 | | 10.30 | 10.00 | 4.32 | 4.00 | 13.66 | 12.80 |
| Wheat Grower, 1-8-2 | New Windsor | .24 | .30 | 1.06 | 1.00 | .65 | | 8.85 | 8.00 | 2.76 | 2.00 | 11.58 | 10.20 |
| **Dorchester Fertilizer and Lime Co., Cambridge, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, H. G. | Cambridge | | | | | 1.00 | | 16.10 | 16.00 | | | 9.81 | 9.60 |
| Grain Grower, 10-4 | Cambridge | | | | | .65 | | 10.55 | 10.00 | 4.92 | 4.00 | 9.87 | 8.80 |
| Lime Phosphate and Potash | Cambridge | | | .15 | .15 | 2.45 | | 5.70 | 8.00 | 2.32 | 2.00 | 6.01 | 6.80 |
| Old Dorset, 1-8-4 | Cambridge | .33 | | .79 | 1.00 | .30 | | 9.10 | 8.00 | 4.20 | 4.00 | 11.61 | 11.60 |
| Old Glory, 12-5 | Cambridge | | | | | .90 | | 12.00 | 12.00 | 5.44 | 5.00 | 11.15 | 10.70 |
| Our Special, 2-8-5 | Cambridge | 1.11 | | 1.57 | 2.00 | 1.50 | | 8.80 | 8.00 | 4.20 | 5.00 | 14.73 | 16.30 |

*Total Phosphoric Acid.

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Edelen Bros., Balto., Md.** | | | | | | | | | | | | | |
| Wheat and Grain Mixture, 1-9-3 | Baltimore | .56 | .60 | 1.02 | 1.00 | .75 | | 9.15 | 9.00 | 3.28 | 3.00 | $11.98 | $11.50 |
| Wheat and Grain Mixture, 1-9-3 | Baltimore | .50 | .60 | .91 | 1.00 | .70 | | 9.30 | 9.00 | 3.04 | 3.00 | 11.46 | 11.50 |
| Wheat and Grain Mixture, 1-9-3 | Baltimore | .69 | .60 | 1.13 | 1.00 | 1.00 | | 9.10 | 9.00 | 3.00 | 3.00 | 12.23 | 11.50 |
| Wheat and Grain Mixture, 1-9-3 | Baltimore | .57 | .60 | 1.08 | 1.00 | 1.00 | | 9.00 | 9.00 | 3.00 | 3.00 | 11.97 | 11.50 |
| **Farmers Fertilizer and Feed Co., Westminster, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Westminster | | | | | .65 | | 16.25 | 16.00 | | | 9.85 | 9.60 |
| High Grade, 2-11-3 | Westminster | 1.20 | | 2.05 | 2.00 | 1.85 | | 11.15 | 11.00 | 3.86 | 3.00 | 17.87 | 16.70 |
| No. 3 Fertilizer, 1½-8-3 | Westminster | .70 | | 1.38 | 1.50 | 1.10 | | 8.30 | 8.00 | 3.78 | 3.00 | 13.32 | 12.90 |
| Potato Phosphate, 2-8-5 | Westminster | 1.11 | | 2.12 | 2.00 | 1.40 | | 8.10 | 8.00 | 4.60 | 5.00 | 16.77 | 16.30 |
| XX Fertilizer, 1-9-3 | Westminster | .44 | | 1.11 | 1.00 | 1.20 | | 9.10 | 9.00 | 3.28 | 3.00 | 12.38 | 11.50 |
| XXX Fertilizer, 1-9-4 | Westminster | .65 | | 1.06 | 1.00 | 1.45 | | 8.65 | 9.00 | 4.70 | 4.00 | 12.94 | 12.20 |
| **Farmers and Planters Co., Salisbury, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, H. G. | Salisbury | | | | | 1.30 | | 16.60 | 16.00 | | | 10.16 | 9.60 |
| Fish Mixture, 2-8-2 | Salisbury | .84 | 1.25 | 1.47 | 2.00 | 1.40 | | 8.30 | 8.00 | 2.78 | 2.00 | 13.02 | 14.20 |
| Fish Mixture, 2-8-2 | Salisbury | .79 | 1.25 | 1.44 | 2.00 | .88 | | 7.27 | 8.00 | 2.90 | 2.00 | 12.28 | 14.20 |
| General Crop Grower, 1-10-2 | Salisbury | .34 | .97 | 1.01 | 1.00 | 1.43 | | 9.72 | 10.00 | 2.36 | 2.00 | 11.73 | 11.40 |
| General Crop Grower, 1-10-2 | Salisbury | .43 | .80 | 1.06 | 1.00 | 1.15 | | 9.10 | 10.00 | 2.08 | 2.00 | 11.33 | 11.40 |
| H. G. Kainit | Salisbury | | | | | | | | | 14.24 | 12.04 | | |
| Special Fish Mixture, 2-8-5 | Salisbury | 1.02 | 1.25 | 1.77 | 2.00 | 1.35 | | 8.25 | 8.00 | 5.00 | 5.00 | 15.73 | 16.30 |
| Special Fish Mixture, 2-8-5 | Salisbury | .79 | 1.52 | 1.57 | 2.00 | 1.45 | | 9.95 | 8.00 | 5.08 | 5.00 | 16.03 | 16.30 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Frederick Mehring Fertilizer Works, Keymar, Md.** | | | | | | | | | | | | | | |
| Mammoth Truck Grower, 2-8-5 | Westminster | .62 | 1.30 | 1.39 | 2.00 | .65 | | 9.95 | 8.00 | 5.62 | 5.00 | 15.56 | 16.30 |
| Mammoth Truck Grower, 2-8-5 | Bruceville | | | 1.82 | 2.00 | .40 | | 8.60 | 8.00 | 6.04 | 5.00 | 16.73 | 16.30 |
| Acid Phosphate, 16% | Bruceville | | | | | .50 | | 16.70 | 16.00 | | | 10.10 | 9.60 |
| Big 4, 1-9-3 | Bruceville | | | 1.01 | 1.00 | .40 | | 9.55 | 9.00 | 3.68 | 3.00 | 12.41 | 11.50 |
| Potash Mixture, 12-5 | Bruceville | | | | | .40 | | 12.45 | 12.00 | 6.16 | 5.00 | 11.84 | 10.70 |
| **Griffith and Boyd Co., Balto., Md.** | | | | | | | | | | | | | | |
| High Grade Acid Phosphate, 16% | Baltimore | | | | | .85 | | 16.25 | 16.00 | | | 9.88 | 9.60 |
| Farmers Queen, 1-9-3 | Baltimore | .58 | .24 | 1.11 | 1.00 | .75 | | 9.25 | 9.00 | 3.56 | 3.00 | 12.59 | 11.50 |
| Fish and Blood Mixture, 1.75-7-0 | Baltimore | .65 | .38 | 1.76 | 1.75 | .85 | | 7.15 | 7.00 | | | 11.46 | 11.20 |
| Fish, Blood and Potash | Baltimore | .94 | .38 | 1.74 | 1.75 | .60 | | 7.40 | 7.00 | 2.32 | 2.00 | 13.11 | 12.60 |
| Fish and Potash Mixture | Baltimore | 1.53 | .49 | 2.08 | 2.00 | 1.30 | | 12.05 | 12.00 | 8.00 | 8.00 | 21.35 | 20.80 |
| Pure Fine Ground Bone Meal | Baltimore | | | 3.84 | 4.00 | | | *21.40 | *20.00 | | | 26.06 | 26.00 |
| XX Potash Manure | Baltimore | | | | | .25 | | 11.45 | 10.00 | 5.00 | 5.00 | 10.41 | 9.50 |
| XX Potash Manure | Baltimore | | | | | .90 | | 10.40 | 10.00 | 4.88 | 5.00 | 9.80 | 9.50 |
| **Hampstead Fertilizer Co., Hampstead, Md.** | | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Hampstead | | | | | 1.55 | | 16.05 | 16.00 | | | 9.86 | 9.60 |
| 1-8-4 | Hampstead | .75 | .60 | 1.40 | 1.00 | 1.80 | | 9.10 | 8.00 | 5.20 | 4.00 | 14.97 | 11.60 |
| **Horsey Roe and Co., Greensboro, Md.** | | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Greensboro | | | | | .55 | | 16.55 | 16.00 | | | 10.01 | 9.60 |
| Crop Grower, 1-8-4 | Greensboro | .41 | .50 | 1.06 | 1.00 | 1.78 | | 8.02 | 8.00 | 4.68 | 4.00 | 12.60 | 11.60 |
| Crop Grower, 1-8-4 | Greensboro | .29 | .50 | 1.01 | 1.00 | 2.00 | | 9.40 | 8.00 | 4.28 | 4.00 | 12.98 | 11.60 |
| 12-5 | Greensboro | | | | | .15 | | 13.35 | 12.00 | 4.68 | 5.00 | 11.31 | 10.70 |
| **Hubbard Fertilizer Co., Balto., Md.** | | | | | | | | | | | | | | |
| Farmers' IXL, 2-8-2 | Baltimore | 1.44 | 1.00 | 2.00 | 2.00 | 1.38 | | 7.52 | 8.00 | 1.90 | 2.00 | 14.05 | 14.20 |
| H. G. Potash Mixture, 10-4 | Baltimore | | | | | .35 | | 10.35 | 10.00 | 4.00 | 4.00 | 9.06 | 8.80 |
| **Maryland Milling and Supply Co., Sykesville, Md.** | | | | | | | | | | | | | | |
| Acid Phosphate, H. G. | Sykesville | | | | | .40 | | 16.60 | 16.00 | | | 10.02 | 9.60 |
| Phosphate and Potash, 10-5 | Sykesville | | | | | .20 | | 10.20 | 10.00 | 4.03 | 5.00 | 8.97 | 9.50 |
| Phosphate and Potash, 12-5 | Sykesville | | | | | .30 | | 12.50 | 12.00 | 4.60 | 5.00 | 10.77 | 10.70 |

*Total Phosphoric Acid.

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Massey and Wilmer, Chestertown, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Chestertown | | | | | .60 | | 16.80 | 16.00 | | | $10.17 | $9.60 |
| Crop Producer Superphosphate | Chestertown | .58 | | 1.06 | 1.00 | .50 | | 10.40 | 9.00 | 3.32 | 3.00 | 12.88 | 11.50 |
| Superphosphate, 10-5 | Chestertown | | | | | .40 | | 9.45 | 10.00 | 6.88 | 5.00 | 10.55 | 9.50 |
| Superphosphate, 12-5 | Chestertown | | | | | .40 | | 12.60 | 12.00 | 5.24 | 5.00 | 11.29 | 10.70 |
| Superphosphate, 12-5 | Chestertown | | | | | .55 | | 12.25 | 12.00 | 5.70 | 5.00 | 11.42 | 10.70 |
| Trustworthy Superphosphate | Chestertown | 1.33 | .73 | 2.13 | 2.00 | 1.58 | | 7.57 | 8.00 | 5.82 | 5.00 | 17.37 | 16.30 |
| **Miller Fertilizer Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | .95 | | 15.90 | 16.00 | | | 9.68 | 9.60 |
| Acid Phosphate, 16% | Baltimore | | | | | .75 | | 16.05 | 16.00 | | | 9.74 | 9.60 |
| Ammoniated, 2-8-2 | Baltimore | 1.49 | 1.00 | 2.00 | 2.00 | 1.85 | | 6.85 | 8.00 | 2.04 | 2.00 | 13.82 | 14.20 |
| Ammoniated, 2-8-2 | Baltimore | 1.36 | 1.00 | 1.84 | 2.00 | 1.00 | | 8.10 | 8.00 | 2.04 | 2.00 | 13.80 | 14.20 |
| Ammoniated, 2-8-2 | Baltimore | 1.43 | 1.00 | 2.01 | 2.00 | 1.23 | | 7.27 | 8.00 | 2.00 | 2.00 | 13.98 | 14.20 |
| Standard Phosphate, 3-8-3 | Baltimore | 2.12 | 2.00 | 2.77 | 3.00 | 1.53 | | 7.27 | 8.00 | 3.36 | 3.00 | 18.02 | 18.90 |
| 2-8-5 | Baltimore | 1.45 | 1.00 | 2.01 | 2.00 | 1.18 | | 7.57 | 8.00 | 5.24 | 5.00 | 16.43 | 16.30 |
| **G. Ober and Sons Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, H. G. | Baltimore | | | | | .75 | | 16.05 | 16.00 | | | 9.74 | 9.60 |
| Acid Phosphate, H. G. | Baltimore | | | | | 1.95 | | 16.15 | 16.00 | | | 9.98 | 9.60 |
| Bone Mixture | Baltimore | 1.62 | .70 | 2.03 | 2.00 | 1.15 | | 9.90 | 9.00 | 5.00 | 5.00 | 17.73 | 16.90 |
| Bone Mixture | Baltimore | 1.35 | .70 | 2.08 | 2.00 | .85 | | 9.95 | 9.00 | 5.16 | 5.00 | 18.03 | 16.90 |
| Bone Mixture | Baltimore | 1.28 | .70 | 2.05 | 2.00 | 1.30 | | 9.70 | 9.00 | 5.36 | 5.00 | 17.97 | 16.90 |
| Farmers Mixture | Baltimore | .88 | .34 | 1.31 | 1.00 | 1.00 | | 9.30 | 9.00 | 2.54 | 2.00 | 12.75 | 10.80 |
| Farmers Mixture | Baltimore | .72 | .34 | 1.13 | 1.00 | 1.15 | | 9.45 | 9.00 | 2.08 | 2.00 | 11.82 | 10.80 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sol. Amm'td. Super-Phos. of Lime | Baltimore | 1.41 | .70 | 2.08 | 2.00 | .65 | 8.85 | 8.00 | 2.42 | 2.00 | 15.42 | 14.20 |
| Special Plant Food | Baltimore | 1.45 | .70 | 2.05 | 2.00 | 1.35 | 9.05 | 9.00 | 5.36 | 5.00 | 17.58 | 16.90 |
| Standard Potash Compound | Baltimore | | | | | .40 | 12.00 | 12.00 | 6.72 | 6.00 | 11.96 | 11.40 |
| Standard Potash Compound | Baltimore | | | | | .50 | 12.10 | 12.00 | 6.60 | 6.00 | 11.96 | 11.40 |
| Superior Potato and Veg. Grower | Baltimore | 1.22 | .85 | 1.80 | 2.00 | 1.15 | 8.65 | 8.00 | 9.20 | 10.00 | 19.00 | 19.80 |
| Super Wheat and Grain Grower | Baltimore | 1.77 | 1.00 | 2.73 | 3.00 | 3.60 | 12.70 | 12.00 | 3.82 | 3.00 | 21.75 | 21.30 |
| Twelve and Five Potash Comp. | Baltimore | | | | | 1.30 | 12.40 | 12.00 | 5.94 | 5.00 | 11.80 | 10.70 |
| Twelve and Five Potash Comp. | Baltimore | | | | | .40 | 12.20 | 12.00 | 5.08 | 5.00 | 10.94 | 10.70 |
| **Patuxent Guano Co., Balto., Md.** | | | | | | | | | | | | |
| Champion Fertilizer | Baltimore | 1.45 | .60 | 2.00 | 2.00 | .85 | 8.25 | 8.00 | 5.66 | 5.00 | 17.04 | 16.30 |
| Champion Fertilizer | Baltimore | 1.50 | .60 | 2.06 | 2.00 | .75 | 9.05 | 8.00 | 5.28 | 5.00 | 17.48 | 16.30 |
| **Peerless Fertilizer Co., Chestertown, Md.** | | | | | | | | | | | | |
| Acid Phosphate, 16% | Chestertown | | | | | .25 | 17.55 | 16.00 | | | 10.57 | 9.60 |
| Fords Ideal | Chestertown | .88 | | 1.19 | 1.00 | .15 | 9.35 | 9.00 | 3.00 | 3.00 | 12.49 | 11.50 |
| Fords Ideal | Chestertown | .88 | | 1.14 | 1.00 | .20 | 9.00 | 9.00 | 3.74 | 3.00 | 12.61 | 11.50 |
| Imperial Compound | Chestertown | .84 | | 1.08 | 1.00 | .20 | 8.90 | 8.00 | 4.12 | 4.00 | 12.57 | 11.60 |
| 2-8-5 | Chestertown | 1.70 | | 2.01 | 2.00 | .40 | 8.80 | 8.00 | 5.32 | 5.00 | 17.10 | 16.30 |
| Twelve and Five | Chestertown | | | | | .10 | 12.20 | 12.00 | 5.24 | 5.00 | 11.01 | 10.70 |
| Twelve and Five | Chestertown | | | | | .20 | 12.05 | 12.00 | 5.32 | 5.00 | 10.98 | 10.70 |
| **Piedmont-Mt. Airy Guano Co., Balto., Md.** | | | | | | | | | | | | |
| Bone Meal | Baltimore | | | 4.09 | 3.00 | | *23.85 | *22.90 | | | 28.29 | 23.45 |
| Excelsior, 1-8-1 | Baltimore | .60 | .32 | 1.01 | 1.00 | 1.00 | 8.70 | 8.00 | 1.96 | 1.00 | 10.78 | 9.50 |
| Farmers Favorite, 1-8-4 | Baltimore | .53 | .32 | 1.08 | 1.00 | 1.05 | 8.45 | 8.00 | 3.60 | 4.00 | 12.07 | 11.60 |
| Insula Guano, ½-7-2 | Baltimore | | | .51 | .50 | .80 | 7.00 | 7.00 | 2.04 | 2.00 | 7.79 | 7.60 |
| Insula Guano, ½-7-2 | Baltimore | | | .87 | .50 | .80 | 8.70 | 7.00 | 2.28 | 2.00 | 10.42 | 7.60 |
| Perfection Guano | Baltimore | 1.20 | .67 | 1.78 | 2.00 | 1.25 | 8.25 | 8.00 | 4.34 | 5.00 | 15.30 | 16.30 |
| Plow Brand, 2-8-2 | Baltimore | 1.16 | .67 | 2.05 | 2.00 | 1.15 | 8.15 | 8.00 | 2.16 | 2.00 | 14.77 | 14.20 |
| Plow Brand, 2-8-2 | Baltimore | 1.23 | .67 | 2.00 | 2.00 | .88 | 8.07 | 8.00 | 2.12 | 2.00 | 14.45 | 14.20 |
| Plow Brand, 2-8-2 | Baltimore | .18 | .67 | 1.76 | 2.00 | 1.20 | 8.30 | 8.00 | 2.16 | 2.00 | 13.71 | 14.20 |
| Potash Mixture, 12-2 | Baltimore | | | | | 1.10 | 11.75 | 12.00 | 1.80 | 2.00 | 8.48 | 8.60 |
| Raw Bone Mixture | Baltimore | .60 | .41 | 1.35 | 1.25 | 2.50 | 8.85 | 8.00 | 2.86 | 2.00 | 13.09 | 11.20 |
| Special Potash Mixture | Baltimore | | | | | .80 | 10.40 | 10.00 | 5.00 | 5.00 | 9.86 | 9.50 |
| Special Potash Mixture | Baltimore | | | | | 1.00 | 10.50 | 10.00 | 5.36 | 5.00 | 10.20 | 9.50 |
| 3-10-3 | Baltimore | 1.91 | 1.00 | 2.47 | 3.00 | 2.00 | 10.30 | 10.00 | 3.00 | 3.00 | 18.46 | 20.10 |

*Total Phosphoric Acid.

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Piedmont-Mt. Airy Guano Co., Balto., Md. Cont.** | | | | | | | | | | | | | |
| Tankage, 9% | Baltimore | | | 8.81 | 9.00 | | | | | | | | |
| Wheat Compound | Baltimore | | | | | 1.95 | | 12.95 | 12.00 | 5.60 | 5.00 | $11.98 | $10.70 |
| Wheat Compound | Baltimore | | | | | 1.65 | | 13.75 | 12.00 | 5.16 | 5.00 | 12.11 | 10.70 |
| Wheat Compound | Baltimore | | | | | 1.65 | | 13.90 | 12.00 | 5.50 | 5.00 | 12.44 | 10.70 |
| Wheat Compound | Baltimore | | | | | 1.30 | | 14.00 | 12.00 | 5.20 | 5.00 | 12.24 | 10.70 |
| Wheat Compound | Baltimore | | | | | 2.00 | | 12.20 | 12.00 | 5.24 | 5.00 | 11.29 | 10.70 |
| Wheat Compound | Baltimore | | | | | .80 | | 12.00 | 12.00 | 5.36 | 5.00 | 11.07 | 10.70 |
| Wheat Compound | Sharptown | | | | | .80 | | 11.90 | 12.00 | 5.36 | 5.00 | 11.01 | 10.70 |
| **Ramsburg Fertilizer Co., Frederick, Md.** | | | | | | | | | | | | | |
| Ammon'td. Bone Phosphate, 1-10-2 | Frederick | .50 | .61 | 1.01 | 1.00 | 1.50 | | 11.90 | 10.00 | 2.04 | 2.00 | 12.84 | 11.40 |
| Excelsior Half and Half, 1-10-1 | Frederick | .53 | .61 | 1.08 | 1.00 | 1.60 | | 11.45 | 10.00 | 1.98 | 1.00 | 12.82 | 10.70 |
| Excelsior Plant Food, 2-12-2 | Frederick | .78 | 1.83 | 1.74 | 2.00 | 2.63 | | 10.57 | 12.00 | 2.04 | 2.00 | 15.12 | 16.60 |
| Old Virginia Compound, 1-10-4 | Frederick | .54 | .61 | 1.09 | 1.00 | 2.30 | | 10.30 | 10.00 | 3.54 | 4.00 | 13.37 | 12.80 |
| Queen, ½-10-1 | Frederick | | | .63 | .50 | 1.30 | | 10.90 | 10.00 | 1.36 | 1.00 | 10.21 | 8.70 |
| Super Phosphate, 16% | Frederick | | | | | 1.15 | | 16.15 | 16.00 | | | 9.86 | 9.60 |
| **Rasin-Monumental Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | .15 | | 16.05 | 16.00 | | | 9.65 | 9.60 |
| H. G. Phosphate and Potash, 12-5 | Baltimore | | | | | .55 | | 12.05 | 12.00 | 5.36 | 5.00 | 11.06 | 10.70 |
| H. G. Phosphate and Potash, 12-5 | Baltimore | | | | | .60 | | 12.10 | 12.00 | 5.16 | 5.00 | 10.96 | 10.70 |
| **Reindollar Co., Taneytown, Md.** | | | | | | | | | | | | | |
| Ammoniated Phosphate, 1-12-5 | Taneytown | .68 | | 1.16 | 1.00 | 1.00 | | 12.10 | 12.00 | 5.16 | 5.00 | 15.66 | 14.70 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grain Grower, 2-10-5 | Taneytown | 1.48 | | 2.33 | 2.00 | 1.35 | | 10.35 | 10.00 | 5.16 | 5.00 | 19.34 | 17.50 |
| Rock and Potash Fertilizer, 12-6 | Taneytown | | | | | .75 | | 12.85 | 12.00 | 6.24 | 6.00 | 12.19 | 11.40 |
| **F. S. Royster Guano Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | 1.85 | | 16.05 | 16.00 | | | 9.91 | 9.60 |
| Bully Guano, 2-8-5 | Baltimore | 1.28 | 1.33 | 2.00 | 2.00 | 1.35 | | 8.15 | 8.00 | 4.68 | 5.00 | 16.37 | 16.30 |
| Genuine German Kainit | Baltimore | | | | | | | | | 14.04 | 12.40 | | |
| Lime Phosphate | Baltimore | | | | | 1.40 | | 13.20 | 13.00 | | | 8.13 | 7.80 |
| Rational Guano, 1-8-4 | Baltimore | .53 | .66 | 1.01 | 1.00 | 1.40 | | 8.10 | 8.00 | 4.00 | 4.00 | 11.91 | 11.60 |
| Phosphate and Potash, 12-5 | Baltimore | | | | | 1.18 | | 11.27 | 12.00 | 5.28 | 5.00 | 10.64 | 10.70 |
| Seeding Down Guano, 1-9-3 | Baltimore | .68 | .66 | 1.19 | 1.00 | 1.85 | | 9.45 | 9.00 | 3.78 | 3.00 | 13.36 | 11.50 |
| Seeding Down Guano, 1-9-3 | Baltimore | .63 | .66 | 1.14 | 1.00 | 1.55 | | 9.05 | 9.00 | 3.00 | 3.00 | 12.32 | 11.50 |
| Vim Guano, 2-12-2 | Baltimore | 1.38 | 1.33 | 2.01 | 2.00 | 1.50 | | 12.00 | 12.00 | 2.08 | 2.00 | 16.93 | 16.60 |
| **Scott Fertilizer Co., Elkton, Md.** | | | | | | | | | | | | | |
| Soluble Phos. and Potash, 12-5 | Elkton | | | | | .75 | | 11.70 | 12.00 | 5.28 | 5.00 | 10.83 | 10.70 |
| Special Grain Grower, ½-8-4 | Elkton | | | .63 | .50 | .30 | | 8.00 | 8.00 | 4.12 | 4.00 | 10.25 | 9.60 |
| Sure Growth Super Phos., 2-8-3 | Elkton | 1.36 | 1.00 | 2.01 | 2.00 | 1.15 | | 8.15 | 8.00 | 3.04 | 3.00 | 15.23 | 14.90 |
| Tip Top Soluble Phosphate, 16% | Elkton | | | | | .90 | | 16.00 | 16.00 | | | 9.74 | 9.60 |
| Wheat and Grass, ½-8-2 | Elkton | | | .61 | .50 | .70 | | 8.00 | 8.00 | 2.00 | 2.00 | 8.75 | 8.20 |
| **Seaboard By-Products Co., Balto., Md.** | | | | | | | | | | | | | |
| 2-8-5 | Baltimore | 1.01 | .50 | 1.71 | 2.00 | 1.00 | | 8.90 | 8.00 | 5.56 | 5.00 | 16.22 | 16.30 |
| 2-8-5 | Baltimore | 1.01 | .50 | 1.83 | 2.00 | 1.10 | | 8.10 | 8.00 | 5.64 | 5.00 | 16.30 | 16.30 |
| **Shallcross Bros., Middletown, Del.** | | | | | | | | | | | | | |
| Grain Grower | Baltimore | | | | | .30 | | 11.50 | 12.00 | 5.62 | 5.00 | 10.88 | 10.70 |
| **Summers Fertilizer Co., Balto., Md.** | | | | | | | | | | | | | |
| All Crop Grower, 2-8-5 | Baltimore | 1.48 | 1.00 | 2.20 | 2.00 | .90 | | 8.70 | 8.00 | 5.08 | 5.00 | 17.72 | 16.30 |
| Bone Potash Mixture | Baltimore | .81 | .50 | 1.01 | 1.00 | 2.00 | | 12.90 | 14.00 | 5.00 | 5.00 | 15.58 | 15.90 |
| General Favorite, 2-8-2 | Baltimore | 1.06 | 1.00 | 2.00 | 2.00 | .45 | | 8.15 | 8.00 | 2.08 | 2.00 | 14.42 | 14.20 |
| 1-8-4 | Baltimore | .33 | .50 | 1.01 | 1.00 | .80 | | 8.05 | 8.00 | 4.76 | 4.00 | 12.32 | 11.60 |
| 1-8-4 | Baltimore | .41 | .50 | 1.06 | 1.00 | .65 | | 8.05 | 8.00 | 4.08 | 4.00 | 12.03 | 11.60 |

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **Superior Guano Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | 1.10 | | 16.10 | 16.00 | | | $9.83 | $9.60 |
| Caroline Special, 1-9-3 | Baltimore | .47 | .31 | 1.02 | 1.00 | .55 | | 9.05 | 9.00 | 3.08 | 3.00 | 11.75 | 11.50 |
| Caroline Special, 1-9-3 | Baltimore | .37 | .31 | .88 | 1.00 | .65 | | 9.05 | 9.00 | 3.20 | 3.00 | 11.29 | 11.50 |
| Caroline Special, 1-9-3 | Baltimore | .58 | .31 | 1.09 | 1.00 | 1.25 | | 9.15 | 9.00 | 3.62 | 3.00 | 12.57 | 11.50 |
| Caroline Special, 1-9-3 | Baltimore | .48 | .31 | 1.08 | 1.00 | .95 | | 9.05 | 9.00 | 3.00 | 3.00 | 11.99 | 11.50 |
| Phosphate and Potash, 12-5 | Centreville | | | | | .83 | | 10.07 | 12.00 | 5.36 | 5.00 | 9.91 | 10.70 |
| Wheat and Grass, 10-2 | Baltimore | | | | | 1.40 | | 10.00 | 10.00 | 2.12 | 2.00 | 7.69 | 7.40 |
| Wheat and Grass, 10-2 | Baltimore | | | | | .10 | | 11.40 | 10.00 | 2.00 | 2.00 | 8.26 | 7.40 |
| **Swift and Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate Fert. H. G., 16% | Baltimore | | | | | .30 | | 16.50 | 16.00 | | | 9.95 | 9.60 |
| Acid Phosphate Fert. H. G., 16% | Baltimore | | | | | .20 | | 16.05 | 16.00 | | | 9.66 | 9.60 |
| Acid Phosphate Fert. H. G., 16% | Baltimore | | | | | .10 | | 16.50 | 16.00 | | | 9.92 | 9.60 |
| Champion Wheat and Corn Grower, 2-12-2 | Baltimore | 1.59 | 1.30 | 2.00 | 2.00 | .15 | | 11.85 | 12.00 | 2.20 | 2.00 | 16.67 | 16.60 |
| Raw Bone Meal Fertilizer | Baltimore | | | 5.26 | 4.50 | | | *21.85 | *23.00 | | | 31.97 | 29.50 |
| Red Steer, 4-8-10 | Baltimore | 3.35 | 2.60 | 3.74 | 4.00 | .35 | | 8.05 | 8.00 | 10.16 | 10.00 | 26.95 | 27.80 |
| Red Steer, 2-8-2 | Baltimore | 1.47 | 1.30 | 1.81 | 2.00 | .60 | | 8.50 | 8.00 | 2.04 | 2.00 | 13.86 | 14.20 |
| Red Steer, 2-8-2 | Baltimore | 1.33 | 1.30 | 1.74 | 2.00 | .55 | | 8.15 | 8.00 | 2.16 | 2.00 | 13.42 | 14.20 |
| Red Steer, 2-8-2 | Baltimore | 1.43 | 1.30 | 1.86 | 2.00 | .75 | | 8.25 | 8.00 | 2.16 | 2.00 | 14.01 | 14.20 |
| Red Steer, 2-12-4 | Baltimore | 1.49 | 1.30 | 1.90 | 2.00 | .20 | | 12.00 | 12.00 | 4.12 | 4.00 | 17.71 | 18.00 |
| Red Steer, 2-12-4 | Baltimore | 1.45 | 1.30 | 1.83 | 2.00 | .25 | | 12.15 | 12.00 | 4.08 | 4.00 | 17.51 | 18.00 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Special Wheat Grower, 1-8-4 | Baltimore | .92 | .65 | 1.19 | 1.00 | .20 | | 8.00 | 8.00 | 4.12 | 4.00 | 12.47 | 11.60 |
| Special Wheat Grower, 1-8-4 | Baltimore | .77 | .65 | .99 | 1.00 | .15 | | 8.15 | 8.00 | 4.36 | 4.00 | 11.90 | 11.60 |
| 2-8-5 | Baltimore | 1.58 | 1.30 | 2.01 | 2.00 | .30 | | 8.00 | 8.00 | 5.12 | 5.00 | 16.47 | 16.30 |
| **Thomas and Co., Gaithersburg, Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Frederick | | | | | .35 | | 16.35 | 16.00 | | | 9.86 | 9.60 |
| Acid Phosphate, 16% | Union Bridge | | | | | .15 | | 17.25 | 16.00 | | | 10.37 | 9.60 |
| Alkaline Bone, 12-5 | Frederick | | | | | .25 | | 14.15 | 12.00 | 3.36 | 5.00 | 10.88 | 10.70 |
| Blood and Bone, 2-8-2 | Frederick | .63 | .70 | 1.88 | 2.00 | 1.60 | | 13.05 | 8.00 | 1.72 | 2.00 | 16.79 | 14.20 |
| Blood and Bone, 2-8-2 | Union Bridge | .30 | .70 | 1.63 | 2.00 | 1.90 | | 10.30 | 8.00 | 2.24 | 2.00 | 14.56 | 14.20 |
| Crop Grower, 1-8-1 | Frederick | .13 | .70 | .57 | 1.00 | .55 | | 12.00 | 8.00 | 1.58 | 1.00 | 10.67 | 9.50 |
| Harvest Queen, 1¼-10-2 | Frederick | .16 | .70 | .93 | 1.25 | .70 | | 11.60 | 10.00 | 2.24 | 2.00 | 12.36 | 12.40 |
| Plant Food, 1-9-3 | Union Bridge | .11 | .70 | .57 | 1.00 | .50 | | 10.80 | 9.00 | 3.96 | 3.00 | 11.61 | 11.50 |
| Plant Food, 1-9-3 | Frederick | .25 | .70 | .97 | 1.00 | .55 | | 10.65 | 9.00 | 2.72 | 3.00 | 12.25 | 11.50 |
| Tankage | Poolesville | | | 7.66 | | | | *9.30 | | | | 35.29 | |
| **Wm. B. Tilghman Co., Salisbury, Md.** | | | | | | | | | | | | | |
| Bone Tankage Mixture | Salisbury | 1.15 | 1.00 | 2.17 | 2.00 | 2.30 | | 11.15 | 12.00 | 4.32 | 4.00 | 18.74 | 18.00 |
| H. G. Early Truck Guano, 5-8-5 | Salisbury | 3.50 | 2.73 | 5.00 | 5.00 | 2.50 | | 7.65 | 8.00 | 5.50 | 5.00 | 28.82 | 28.30 |
| H. G. Phosphate and Potash, 12-6 | Salisbury | | | | | .80 | | 12.20 | 12.00 | 6.40 | 6.00 | 11.92 | 11.40 |
| Mixture "B", 4-8-4 | Salisbury | 2.63 | 2.25 | 4.13 | 4.00 | 2.53 | | 7.77 | 8.00 | 4.64 | 4.00 | 24.81 | 23.60 |
| Potash Mixture, 2-8-10 | Salisbury | 1.29 | 1.00 | 2.18 | 2.00 | 2.05 | | 6.85 | 8.00 | 8.76 | 10.00 | 19.27 | 19.80 |
| "SP" Mixture, 3-8-8 | Salisbury | 1.49 | | 2.68 | 3.00 | 2.00 | | 8.25 | 8.00 | 8.00 | 8.00 | 21.57 | 22.40 |
| Special, 2-8-5 | Salisbury | 1.13 | 1.00 | 2.03 | 2.00 | 2.20 | | 8.00 | 8.00 | 5.36 | 5.00 | 17.00 | 16.30 |
| Special Wheat and Grass, 1-10-5 | Salisbury | .84 | .50 | 1.40 | 1.00 | 1.65 | | 10.05 | 10.00 | 5.36 | 5.00 | 15.63 | 13.50 |
| Standard Fish Mixture, 2-10-2 | Salisbury | 1.26 | 1.00 | 2.20 | 2.00 | 1.85 | | 10.05 | 10.00 | 2.86 | 2.00 | 17.11 | 15.40 |
| **United States Guano Co., Balto., Md.** | | | | | | | | | | | | | |
| Acid Phosphate, 16% | Baltimore | | | | | .50 | | 17.80 | 16.00 | | | 10.76 | 9.60 |
| Acid Phosphate, 20% | Baltimore | | | | | .55 | | 20.05 | 20.00 | | | 12.11 | 12.00 |
| Grain Grower | Baltimore | 1.25 | | 2.00 | 2.00 | 1.50 | | 8.25 | 8.00 | 2.12 | 2.00 | 14.66 | 14.20 |
| Grain Grower | Baltimore | 2.36 | | 2.97 | 2.00 | 1.35 | | 8.35 | 8.00 | 2.72 | 2.00 | 18.99 | 14.20 |

*Total Phosphoric Acid.

| Name and Address of Manufacturer and Name of Fertilizer | Place of Sampling | $H_2O$. SOL. AMMONIA | | NITROGEN Calculated as AMMONIA | | PHOSPHORIC ACID | | | | POTASH $K_2O$. | | Comparative Value Per Ton Found | Comparative Value Per Ton Guaranteed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Insoluble | | Available | | | | | |
| | | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | | |
| **United States Guano Co., Balto.** | **Md. Cont.** | | | | | | | | | | | | |
| H. G. Phosphate and Potash | Baltimore | | | | | .10 | | 12.10 | 12.00 | 5.58 | 5.00 | $11.19 | $10.70 |
| Old-Time Guano | Baltimore | 1.59 | | 2.08 | 2.00 | 1.30 | | 11.75 | 12.00 | 4.04 | 4.00 | 18.40 | 18.00 |
| Raw Bone | Owings Mills | | | 4.19 | 4.50 | | | *22.15 | *22.00 | | | 27.84 | 29.00 |
| Rainbow Brand | Owings Mills | 1.60 | | 2.01 | 2.00 | .65 | | 12.75 | 12.00 | 2.48 | 2.00 | 17.53 | 16.60 |
| Rainbow Brand | Crownsville | 1.62 | | 2.00 | 2.00 | 1.05 | | 12.55 | 12.00 | 2.56 | 2.00 | 17.48 | 16.60 |
| **E. S. Valliant and Son, Centreville,** | **Md.** | | | | | | | | | | | | |
| Animal Bone Mixture, 1-11-4 | Henderson | .36 | .35 | .87 | 1.00 | 1.25 | | 11.25 | 11.00 | 4.58 | 4.00 | 13.63 | 13.40 |
| Animal Bone Mixture, 1-11-4 | Centreville | .61 | .35 | 1.14 | 1.00 | 1.75 | | 10.70 | 11.00 | 4.60 | 4.00 | 14.46 | 13.40 |
| 11-4 | Centreville | | | | | .50 | | 11.00 | 11.00 | 4.16 | 4.00 | 9.59 | 9.40 |
| Grain Grower, ½-8-2 | Centreville | | | .63 | .50 | .50 | | 8.40 | 8.00 | 2.24 | 2.00 | 9.21 | 8.20 |
| Keystone, 2-9-5 | Centreville | 1.83 | 1.50 | 2.26 | 2.00 | .05 | | 10.75 | 9.00 | 4.24 | 5.00 | 18.47 | 16.90 |
| McKenney and Jacobs Mix., 2-9-5 | Centreville | .65 | .25 | 1.76 | 2.00 | 2.30 | | 9.00 | 9.00 | 5.68 | 5.00 | 16.77 | 16.90 |
| Oriole, ½-9-4 | Centreville | | | .58 | .50 | .50 | | 9.30 | 9.00 | 4.08 | 4.00 | 10.84 | 10.20 |
| Standard, 1-9-4 | Centreville | .76 | .50 | 1.19 | 1.00 | .15 | | 9.05 | 9.00 | 4.00 | 4.00 | 13.01 | 12.20 |
| 10-2 | Centreville | | | | | .60 | | 10.40 | 10.00 | 3.04 | 2.00 | 8.46 | 7.40 |
| 12-5 | Centreville | | | | | .15 | | 12.85 | 12.00 | 5.12 | 5.00 | 11.31 | 10.70 |
| **W. H. Valliant and Bro., Bellevue,** | **Md.** | | | | | | | | | | | | |
| Crab Special | Bellevue | .28 | | 2.38 | 2.00 | 1.80 | | 5.60 | 4.00 | 6.86 | 6.00 | 17.95 | 14.60 |
| Fertilizer, 2-8-6 | Bellevue | .50 | | 2.00 | 2.00 | 1.90 | | 8.70 | 8.00 | 6.40 | 6.00 | 17.99 | 17.00 |
| Fertilizer, 2-4-6 | Bellevue | .13 | | 2.13 | 2.00 | 1.50 | | 4.70 | 4.00 | 7.30 | 6.00 | 16.68 | 14.60 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Virginia-Carolina Chemical Co., Ba** | **lto., Md.** | | | | | | | | | | | | |
| Challenge Brand, 1-9-3 | Baltimore | .75 | .67 | .99 | 1.00 | .75 | | 8.85 | 9.00 | 3.08 | 3.00 | 11.54 | 11.50 |
| Challenge Brand, 1-9-3 | Baltimore | .82 | .67 | 1.06 | 1.00 | .75 | | 8.90 | 9.00 | 3.12 | 3.00 | 11.87 | 11.50 |
| Challenge Brand, 1-9-3 | Baltimore | .77 | .67 | 1.06 | 1.00 | 1.00 | | 8.90 | 9.00 | 3.28 | 3.00 | 12.03 | 11.50 |
| Fish, Bone and Potash, 2-8-3 | Baltimore | 1.54 | .78 | 2.00 | 2.00 | 1.20 | | 8.10 | 8.00 | 3.32 | 3.00 | 15.36 | 14.90 |
| Fish, Bone and Potash, 2-8-3 | Baltimore | 1.46 | .78 | 1.97 | 2.00 | 1.25 | | 8.05 | 8.00 | 3.28 | 3.00 | 15.20 | 14.90 |
| H. G. Phosphate and Potash, 12-5 | Baltimore | ----- | ----- | ----- | ----- | .50 | | 12.90 | 12.00 | 5.08 | 5.00 | 11.38 | 10.70 |
| H. G. Phosphate and Potash, 12-5 | Baltimore | ----- | ----- | ----- | ----- | .50 | | 12.20 | 12.00 | 5.20 | 5.00 | 11.04 | 10.70 |
| Phosphate and Lime Mix., 13% | Baltimore | ----- | ----- | ----- | ----- | 1.00 | | 13.40 | 13.00 | ----- | ----- | 8.19 | 7.80 |
| South Shore Brand, 2-8-5 | Baltimore | 1.79 | .78 | 2.03 | 2.00 | .80 | | 8.40 | 8.00 | 5.12 | 5.00 | 16.86 | 16.30 |
| Standard Crop Grower, 2-8-2 | Baltimore | 1.67 | .78 | 2.01 | 2.00 | 1.00 | | 8.10 | 8.00 | 2.00 | 2.00 | 14.45 | 14.20 |
| **Westminster Fertilizer Co., Westm** | **inster, Md.** | | | | | | | | | | | | |
| Governor, 1½-10-3 | Westminster | .84 | ----- | 1.76 | 1.50 | .85 | | 9.80 | 10.00 | 4.32 | 3.00 | 16.07 | 14.10 |
| Leader, 1-10-3 | Westminster | .36 | .49 | .99 | 1.00 | .95 | | 10.05 | 10.00 | 3.36 | 3.00 | 12.48 | 12.10 |
| Super "A", 1-10-2 | Westminster | .27 | .49 | .99 | 1.00 | .95 | | 10.75 | 10.00 | 2.24 | 2.00 | 12.12 | 11.40 |
| **Worcester Fertilizer Co., Snow Hill** | **, Md.** | | | | | | | | | | | | |
| Acid Phosphate, 16% | Snow Hill | ----- | ----- | ----- | ----- | .10 | | 16.30 | 16.00 | ----- | ----- | 9.80 | 9.60 |
| Balanced Plant Food | Snow Hill | 1.31 | .67 | 2.20 | 2.00 | 1.55 | | 9.80 | 10.00 | 2.64 | 2.00 | 16.76 | 15.40 |
| Bumper Crop Grower | Snow Hill | .79 | .33 | 1.49 | 1.00 | 1.20 | | 9.40 | 10.00 | 6.06 | 5.00 | 16.02 | 13.50 |
| Fish, Bone and Potash | Snow Hill | 1.11 | .67 | 2.12 | 2.00 | 1.85 | | 8.15 | 8.00 | 2.78 | 2.00 | 15.60 | 14.20 |
| Twelve and Five | Snow Hill | ----- | ----- | ----- | ----- | .60 | | 12.00 | 12.00 | 5.94 | 5.00 | 11.45 | 10.70 |

*Total Phosphoric Acid.